Anonymous Referee #2

We would like to thank the reviewers for their suggestions and comments.
Following the suggestions, we included improvements in the manuscript.
Below, point-by-point responses to the reviewer's comments on the manuscript.

1) *General comment about English grammar: The English grammar could use some additional revision by a native English speaker. The grammar is generally understandable, but sometimes causes confusion in the readers' ability to understand the intended meaning of the authors' words and sentences. A few examples of awkward wording include: "Heavy" rainfall – I suggest using "long duration" or "intense" to specifically describe rainfall; and "Rainfalls" – "rainfall" should be used when describing all types of rain. No "s" is needed.*

The authors changed the "heavy (rainfall)" by "intense", and the article has been reviewed by the American Journal Experts (cf. the certificate provided). The correction between "rainfall" and "rainfall**s"** has been made.

2) *Title: I like the title "Statistical correlation between rock fall and meteorological databases" better than the title currently being used. I think this shorter title is cleaner and easier for the reader to quickly read and understand.*

The title has been changed in "statistical correlation between meteorological and rockfall databases".

Many locations in the manuscript need additional explanation so that readers fully understand the authors reasoning. Specific suggestions are given below:

4) *p. 1335, line 15. I suggest giving a reference or specific example of a classical approach that has been used to analyze rock fall in the past. Same suggestion for p.1336, line 102.*

Some references has been added (p.2, l.19 and p.3, l.4)

5) *p. 1335, line 26-27, why are these items not considered? Please explain. Also, it seems that you should use the term "volume" here instead of intensity, so not to confuse the meaning with rainfall intensity.*

The word "volume" has replaced the word "intensity". Information about the volume range of the rockfalls as well as the mean height of the rock walls has been added for the three study sites (p.5, l.2-3; p.5, l.12-13; p.5, 17-18; p.5, l.26-28) according to the comments of the other reviewer. The p.2,l.31-32 and p.3, l.1-2 has been changed in function.

6) *p. 1336, lines 8-9, I think what you mean here is that the geology and geotech characteristics in each individual area is consistent. But, what it sounds like you are saying is that the geology in all of the areas is the same, which is definitely not true. Please revise this paragraph to more accurately reflect the true meaning.*

You are perfectly right. We changed the paragraph part (p.4, l4-6) and we chosen to explain the importance of the geology on each study site on the discussion part (p.13, l.3-24).

7) *p. 1337, line 10, unclear what you mean here. You completed the study for Durville and Rat? I don't think this is true. Please revise.*

We changed the sentence p4. L 5-6.

8) *p. 1338, line 3, how can a railroad present a hazard?*

The sentence has been changed (p.4, l.27).

9) *p. 1338, line 11, please define "several days".*

We defined "several days" p.5, l.9.

10) *p. 1339, line 14-17. I don't understand what you mean here. Please add an example or additional explanatory text to make your meaning more clear.*

The paragraph has been changed to make it clearer (p.6, l.4-5)

11) *p. 1340, line 6. What is a "sector"? Do you mean "study sites"? Please be consistent in your usage of terms. Also, if the other two sites didn't show satisfactory results, then why bother to show Figure 3B?*

Yes, the "sector" is the "study site". We changed the word to be consistent in the usage of terms (p.7, l.18). We decided to keep the Figure 3-b to show an example of a cross correlation with no result.

12) *p. 1340, line 20, which proposed method are you referring to here? This sentence seems out of place. Also, a delay in time is shown in Figure 3, and it seems to work very nicely.*

The method discussed here corresponds to the method that we developed (p.8, l.1).

13) *p. 1341, lines 3-6, this paragraph is awkwardly written and difficult to understand. Please add additional explanation so the meaning is clear. This is a very important paragraph for the paper, but it is currently very difficult to follow.*

Some changes have been made to make this paragraph clearer (p.9, l.6-8).

14) *p. 1341, line 14, "triggering factor intensity", please try to be consistent with your usage of "intensity". I think you are using the term here to mean "cumulative daily rainfall".*

We changed the word "intensity" by "magnitude".

15) *p. 1341, lines 19-22. This paragraph needs more explanation so the reader knows exactly why an analysis of virtual rock fall and rainfall databases is needed. Why bother with virtual databases, when you have real databases? I'm sure that you have a good reason, but it is definitely not clear from the current text. If you don't really need to do the analysis of the virtual databases, then this could eliminate pages 1342 and 1343 and some tables and figures.*

A part has been added to precise the interest of this analysis (p.9, l.22-25).

16) *P. 1343, lines 4-8, This paragraph belongs in the Results section.*

We agree with this comment. The change was made.

17) *p. 1343, line 26-27, Figures 4 and 5 seem to be mixed up. You cite Fig. 4, but results for the Bourgogne region are shown in Fig. 5.*

Exact. The correction has been made.

18) *p. 1344, I don't see a citation to Figure 8 in the text.*

That comes from the mistakes in the number of Figure. The correction has been made.

19) *p. 1345, Discussion section. I think this section needs a sub-section where you provide an interpretation of why the different correlations exist for the 3 different regions. In other words, what are the underlying physical processes that would explain the different correlations? This would be very helpful to readers studying rock fall in other areas.*

This is a really interesting point that you propose to add. We think this is really important in our article, and it brings value to our work. We added a part in the discussion section to propose our interpretation of the physical processes leading to the fall (p.13, l.3-24).

20) *p. 1345, line 13-15. You should really add that the manager would need to make a decision based on a rainfall forecast (a rainfall prediction provided at least a day in advance) in order for such a decision to be useful.*

We agree with your comment, and we added this precision (p.14, l.7-8)

21) *p. 1346, line 5-7, this is part of what you need to say on p. 1341, lines 19-22.*

It's done.

22) *Table 1. Too many significant digits for 0.0027?*

We changed the 0.0027 into 0.003.

23) *Table 3. This should be a figure, not a table.*

We transformed it in figure.

24) *Table 4. Please define "very close".*

This is a term coming from a previous version of the article. The correction has been made.

25) *Figure 1. I suggest listing the regions in the same order as you discuss them in the text. That is A) La-Reunion, B) Bourgogne, and C) Auvergne 26) Figure 3. Each figure needs a label (i.e., A and B). What is the solid horizontal line in A and B? Please add this explanation to the caption.*

We don't understand this comment. The order of the region is the same than in the text. A change has been done Fig 3.

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